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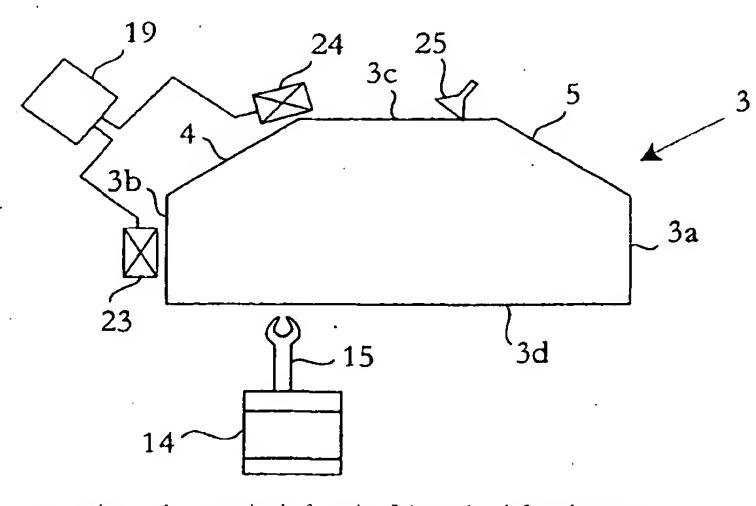
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camera pair may be comprised of a pair of thermal or infrared cameras.

(57) Abstract: An arrangement for determining positions of the teats of an animal is provided in a robot-based milking system. The arrangement comprises a camera pair directed towards the teats of the animal for repeatedly recording pairs of images, and an image processing device for repeatedly detecting the teats of the animal and determining their positions by a stereoscopic calculation method based on the recorded pairs of images. The image processing device may he provided to initially determine the absolute position of a teat of the milking animal in a coordinate system of the milking system, and to later determine the position of the teat of the milking animal relative to the robot arm or the teat cup repeatedly, wherein the position of the teat of the milking animal relative to the robot arm or the teat cup is more exact than the absolute position. The

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